THE EUGENICS REVIEW

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PERIODICALS

Agenda

May 1943, Vol. 2, No. 2.—Birth-Rate and Family Allowances.-By R. A. Fisher.-This article is written with Professor Fisher's customary lucidity and force. Its chief interest lies in his plea for graded schemes such as would help parents at different income levels to bring up their children according to their own standards of living. He recognizes the importance of such schemes being self-financing, since the State cannot be expected to give different rates of allowances for children of parents with differing incomes. Unfortunately, he puts forward as his only suggestion the pool scheme for different occupations, such as is practised in France, in spite of the fact that this would not be welcomed by the great majority of professions and industries in this country, and has indeed many disadvantages and limitations. He fails to give much-needed publicity to other types of schemes based on the principle of income-tax rebates which would achieve the same end with far less administrative difficulty.

EVA M. HUBBACK.

Archiv der Julius Klaus-Stiftung

1943, Vol. 18, Nos. 3/4.—Erbtypen und Formen bei Brachydaktylie.—By Hans R. Schinz.—An attempt to differentiate between apparently irregular brachydactilic malformations. Four principal types are distinguishable, namely, the Farabee type with brachyhypophalangism, the Drinkwater I type with brachymesophalangism and brachyhypophalangism, the Drinkwater II type with brachymesophalangism, and the Vidal type with brachyhyperphalangism.

Schizophrenes und endokrines Krankheitsgeschehen. By M. Bleuler. The director of the psychiatric department of Zurich University Hospital discusses the problems of the mutual influences of the endocrine system and schizophrenia: Are the multifarious processes which are now grouped as schizophrenia an entity or are they only superficially similar and attributable to entirely different causes? Can the endocrine symptoms help us to solve the riddle of the "somatose," the physical basis of schizophrenia? Does endocrine disturbance influence the course, signs, symptoms and termination of schizophrenia? These problems can only be solved by separate analyses of the heredity of endocrine disturbance in schizophrenics and that of their mental disease; this important and far-reaching research has been started in the three following investigations: Zur Frage der Beziehungen zwischen dyskrinem und schizophrenem Krankheitsgeschehen. dysplastischer, kretinoider Schizophrener und seine

Familie.—By Edith Ott-Schaub.—A study of the lives and development of all the descendants of the grandparents of a schizophrenic suffering from endocrine disturbance, showing that the complicated endocrine disturbances are due to different genetic factors; that schizophrenia is neither an effect nor a cause of endocrine disturbance; but that these disturbances probably influence the course of the schizophrenia. Zur Frage der Beziehungen zwischen dyskrinem und schizophrenem Krankheitsgeschehen. Maskulin stigmatisierte Frauen und ihre naechste Verwandtschaft.—By Jean Kaufmann.—Nine female schizophrenics with male stigmatization were examined. The author believes that they are genuine schizophrenics and not individuals whose mental symptoms were caused by endocrine disturbance, which, he considers, is an independent constitutional disease. It may be presumed that both the schizophrenia and the endocrine disturbance, if occurring together, are particularly violent. The problem of a possible causal connection is still unsolved. Zur Frage der Beziehungen zwischen dyskrinem und schizophrenem Krankheitsgeschehen. Ein akromegaloider Schizophrener und seine Familie.—By Hansjörg Sulzer.—An investigation of a family in which several cases of schizophrenia and of acromegaly occur. The mental and physical diseases are intimately connected, appearing exclusively in the same individuals and even to the same degree in each case.

The Third Annual Report of the Swiss Genetic Society contains some papers of interest to eugenists:—Ergebnisse der Erforschung von Erbkrankheiten und Missbildungen in der Schweiz.—By E. Hanhart.—Discussion of the occurrence in Switzerland of haemophilia, colour-blindness, nyctalopia, malformations of hands and feet, heredo-ataxias, Albers-Schoenberg's disease, allergic diathesis, deaf-mutism, dwarfism, oligophrenia, etc. Die Berechnung der Mittelwerte in der Biologie.—By A. Fleisch.—The computation of mean values in biology. Umwelteinflüsse auf Geburtenzahl und Knabenüberschuss.—By Ed. Jenny.—The influence of environmental factors on the birth-rate and sex ratio.

1944, Vol. 19, No. 1/2.—Zur Genetik der Exostosis multiplex cartilaginea und der multiplen Knochenchondromatose.—By H. R. Schinz.—These are two different diseases, the former being a frequent hereditary condition of simple dominance while the latter is a very rare sporadic disease which probably is hereditary too, but with only a very slight penetrative power. Zur Frage der endogenen Genese des angeborenen Klumpfusses.—By Alfred Studer.—In the investigated case club foot was combined with syndactilism and brachymesophalangism, which are certainly endogenous and

run in families. An incidental exogenous causation for club foot may be considered extremely unlikely. Schizophrenes und endokrines Krankheitsgeschehen. Ubersicht über die bisherigen Arbeiten.—By Jenny Müller.—A review of literature on the relation between mental disease, particularly schizophrenia, and endocrine disturbance. (In connection with the above-mentioned article by M. Bleuler.)

Positiver Vaterschaftsnachweis auf Grund erblicher Missbildungen der Extremitäten.—By Kurt Nievergelt.—The genetic investigation of four members of a family with identical multiple malformations (i.e., atypical pedes vari with extensive synostoses of the tarsal bones, dysplasias of elbow joints and radio-ulnar synostoses, and dysplasias of the legs) led to paternity being proved in a court of law. Ungewöhnliches, familiares Missbildungssyndrom beider Hände.—By Kurt Nievergelt.—A description of five members of a family showing different degrees of a complicated malformation of both hands. Beitrag zur Vererbung der progressiven Muskeldystrophie.—By A. Sidler. -Investigation of seven cases of progressive muscular dystrophy in one family.

F. F. TIETZE.

Human Fertility

March 1944, Vol. 9, No. 1.—Field Experiment on Proper Birth Spacing.—By Nils P. Larsen, M.D.— Dr. Larsen describes briefly the type of health service available in the plantations of Hawaii. The hospitals, health centres, doctors and nurses are paid for by the plantation, but the doctors are allowed to augment their salaries by a certain amount of private practice among the better-to-do inhabitants. The plantation families live rent free in houses with gardens, to which they become very attached. Through the hospitals and schools a health programme has been launched and some years ago it became obvious that too frequent childbearing was at the bottom of much maternal and child mortality and morbidity which might be avoided by proper family spacing. Therefore birth-control advice was made available in various centres and a number of different methods were tried, none of which, in spite of repeated and careful instruction, proved very successful in the hands of the happy-go-lucky and somewhat unintelligent workers. For cases in which contraception had failed and in which further childbearing was completely contra-indicated, postpartum sterilization of the wife or vasectomy of the husband was added. The former operation, in the author's experience, if carried out within a day or two of delivery does not add materially to the lying-in time and has few complications or contra-indications—although it may occasionally fail. These operations, where indicated, are free of charge; the number carried out rose at first, but by 1942 the number of cases needing this extreme measure started to decrease. The results of this comprehensive health service as indicated by the infant and maternal mortality rates for the Hawaiian sugar plantation as compared with those for the U.S.A. as a whole are gratifying, Infant mortality has been reduced to less than twenty per 1,000 live births and maternal mortality to 0.5 per 1,000 births.

The Check-Up Visit.—A Symposium.—There is a certain difference of opinion about the real necessity for patients to pay one or more return visits to clinic or private doctors after being fitted with an occlusive cap. The journal has invited a number of physicians experienced in this work to submit brief summaries of their views and seven are published in this number. One is non-committal. Three express themselves as strongly in favour of careful and repeated follow-up in every case—giving as their reasons, among others, that it is often found necessary to alter the size of the diaphragm at the second visit; that the patients acquire more confidence and are more inclined to persist with the method; that pelvic pathology may be spotted and treated. Three others are equally emphatic that it is unnecessary and, indeed, undesirable to insist on return visits in every case; the physician experienced in this work should be able to judge when a patient needs to be seen again immediately following the first fitting, and too rigid an insistence on one or two return visits in every case only adds unnecessarily to the work of the clinic staff and the difficulties of the patients.

June 1944, Vol. 9, No. 2.—Phenylmercuric Acetate as a Contraceptive.—By N. J. Eastman, M.D., and A. B. Scott, Ph.D.—The authors here describe a most valuable piece of work which will be of particular interest to English readers, especially to all concerned with Volpar products: inventors, manufacturers, prescribers and last, but not least, users.

Work along these lines was needed and was only prevented in this country by the outbreak of war. We must be grateful to these two American workers for so adequately filling the gap.

They attempt to answer the questions: Is phenylmercuric acetate the most efficacious spermicidal agent known and how effective is it as a contraceptive agent? Is it safe and non-irritant even if used daily? What is its minimal lethal dose in experimental animals? How does this compare with the amount likely to be used over a long period by a woman habitually using Volpar? What percentage introduced into the vagina is absorbed and excreted in the urine?

The authors found it impossible to work with the English product Volpar Gels, as the melting point of the gel is set too low for the American summer, and they found Volpar paste prepared according to Baker's formula was unstable and had an unsatisfactory consistence. They therefore devised a vehicle of their own with the following composition:

	pe	r cent
e .		0.05
		1.0
	••	ı ·8
		2.0
		8 · o
zoate.		0.05
		3·0
	8	4.1
	order	zoate

This preparation has now been under observation for two years for physical stability. Separation does not occur and adequate viscosity is maintained. These statements hold equally true for jellies stored through two Baltimore summers.

Spermicidal Power. They repeated tests done by Brown and Gamble in 1941 and, with a slightly modified technique, confirmed that phenylmercuric acetate is the most potent spermicidal agent so far examined in America. By examining P.M.A. jelly which had been stored for more than twenty-two months they established the fact that there was no loss of spermicidal activity or any evidence

of chemical decomposition with ageing.

Toxicity. (1) The minimal lethal dose (50 per cent deaths) was determined for mice, rats and rabbits and was found to be 20 mg./kg. bodyweight for the first two and 5 mg./kg. for the last. This indicates that the M.L.D. of P.M.A. is of the same order as that of phenylmercuric nitrate, which has been extensively studied by many workers. In terms of clinical usage it should be noted that 4 c.c. of jelly (a maximum single application) contains only 2 o mg. of P.M.A., which for a woman weighing 50 k.g. provides only 0 04 mg./k.g. (roughly 1/500 of the M.L.D. for rats and mice and 1/125 of the M.L.D. for rabbits).

(2) Two sets of experiments were carried out to test chronic toxity, one on rats and the other on rabbits, and in neither was any evidence found of toxicity either during the life of the animals or, after death, in the histological examination of their organs. In one experiment eight rabbits received intravaginal applications five times weekly for ten weeks of 0.5 gm. of the authors' P.M.A. jelly. In none was there any macroscopic or microscopic evidence of local damage or irritation.

(3) Clinical studies. More than 100 patients have used the authors' P.M.A. jelly for more than a year (the number of applications varied from one to five each week). None of these patients complained of any local irritation, and speculum examination of the vagina was negative. Catheter specimens of urine taken at random from fifty of these women were examined for albumen, blood and casts with negative results. Twenty-four of the women instilled 4 c.c. of the jelly into the vagina nightly for three weeks without producing any signs or symptoms.

Absorption from the Vagina. This was investigated in twenty women. In six the excretion of mercury was estimated in twenty-four-hour samples of urine taken before and after a single application of 6 c.c. of P.M.A. jelly into the vagina. The urine was collected by means of retention catheter, and the mercury was determined on 250-c.c. samples by the digestive method described by Hubbard. The other fourteen had been using the P.M.A. jelly regularly two to five times a week for more than six months; their urinary excretion of mercury was estimated in the same way and was found to be of the same order, i.e., only about 80 gammas Hg in the twenty-four hours, or about 4 per cent of that present in the applied jelly. Evidence is adduced by the authors that such a quantity of mercury in urine is negligible from the viewpoint of injury. In other words, there is no evidence that P.M.A. introduced into the vagina in the minute doses in which it is needed in a contraceptive jelly or suppository could produce either acute or chronic mercurial poisoning.

It would seem, therefore, that, on experimental evidence, the authors have established that phenylmercuric acetate, probably the most efficient spermicide at present available, may be regarded as non-toxic to human beings when used over long periods as a contraceptive. This is certainly borne out by clinical observations on the thousands of patients who have been using Volpar products in this country during the past six years.

September 1944, Vol. 9, No. 3.—Iso-immunization by the Rhesus Factor.—By Philip Levine, M.D.— In this paper Dr. Levine summarizes the present position with regard to the Rhesus and other rare factors in human blood which may be responsible for the production of iso-agglutinins. Erythroblastosis fœtalis in its various clinical forms and also, possibly, earlier fœtal death and miscarriage are now recognized as being due to the destruction of fœtal blood by means of antibodies which have been produced in the mother in response to entry into her circulation (by some unknown mechanism) of blood from the fœtus. Thus, for the first time. a specific disease of the fœtus and newborn infant can be attributed to genetic and constitutional differences of the blood of the parents. Erythroblastosis itself is comparatively rare (1 in every 200-300 births), but there is already some evidence that transplacental immunization by other factors besides the Rh factor may rarely be responsible for early or late feetal death. Until such time as methods of preventing transplacental immunization are known, the partners of matings where there is severe incompatibility of blood factors should, in the author's opinion, be advised either to practise contraception or, if further pregnancies are particularly desired, fertilization by means of artificial insemination from a donor whose blood properties are compatible with the wife's.

The Rh factor is of considerable clinical significance, since it can, by inducing iso-immunization, be responsible for severe reactions in Rh-negative individuals; the immunization may be induced either by repeated transfusions of Rh — persons with Rh+ blood, or as a "silent" process during the

course of a pregnancy. Once an Rh - individual has been thoroughly immunized, reactions to Rh+ blood are inevitable and sometimes fatal. It is clear that the detection and labelling of sensitized Rh - individuals (particularly women) is of importance, but, unfortunately, there is as yet a shortage of the necessary diagnostic anti-Rh sera. The Rh — mothers of erythroblastotic infants are the most readily available source at present. Dr. Levine gives the incidence of Rh negativity in a random sample of white population as 15 per cent, whereas, in a series of 350 mothers of erythroblastotic infants the incidence of negativity was go per cent. Thus, it will be seen that some 10 per cent of mothers of infants who appear to be suffering from erythroblastosis are found to be Rh+, and it seems likely that in these cases isoimmunization by some factor other than Rh is the cause. The author, working with Javert, had early observed an atypical agglutinin produced by the Rh+ mother of an Rh- fœtus. The father was also Rh-, and both his blood and that of the infant were agglutinated by the mother's serum. Dr. Levine names this factor and its corresponding antibody Hr and anti-Hr. Similarly, the ordinary A and B blood factors may rarely induce iso-immunization in Rh+ mothers followed by erythroblastosis, in some form, in the fœtus.

The frequency with which fœtal disaster is likely to occur in any particular mating where the wife is Rh - depends, of course, on whether the Rh+ husband is homo- or heterozygous. If he is homozygous, once the wife has become immunized then every subsequent fœtus will be affected; whereas, if he is heterozygous there is a 50 per cent chance of a living and unaffected infant. Clearly, therefore, it is of importance to be able to differentiate between the two genetic. varieties of Rh+ fathers. The father's genotype may be inferred by examining the bloods of any surviving children of the couple, and also, as suggested by McCall, Race and Taylor (Lancet, 1944, 1, 214), it should be possible to differentiate the two types by using anti-Hr serum which fails to agglutinate Rh+ bloods of the homozygous genotype Rh Rh, but does agglutinate those from heterozygous individuals. Thus, anti-Hr sera are of high diagnostic value not only for diagnosis of erythroblastosis fœtalis in the rare cases where the mother is Rh+, but also for the prognosis in future pregnancies in the much larger group of Rh — women. Unfortunately, anti-Hr sera are exceedingly rare, so that the production of an experimental serum of similar specificity is highly desirable.

The author suggests the following practical considerations: Avoidance of transfusion accidents by using Rh—blood for Rh—individuals. Contraception or A.I for cases of Rh incompatibility where the husband is homozygous; induction of premature labour may possibly save a few fœtal lives. As previously stated, where the husband

is heterozygous there is a 50 per cent. chance of success; diagnosis of the husband's genotype is therefore highly important. Research is needed into methods of preventing iso-immunization by limiting transplacental passage of fœtal blood cells or their effect on the mother. All females should be tested for Rh negativity either in early life or premaritally.

M. C. N. JACKSON.

Journal of Criminal Law and Criminology

September-October 1944, Vol. 35, No. 3.—An interesting article on Extreme Ordinal Position and Criminal Behaviour is contributed by J. Asa Shield, consulting neuropsychiatrist, and Austin E. Grigg, psychologist, on the research staff of the Virginia State Penitentiary. The authors remind us that some investigators believe that the size of the family and the serial position in it are factors that precipitate behaviour problems and delinquency, and their article reports a study of the serial position of 300 recent consecutive admissions into the Virginia State Penitentiary. They refer to the findings of Hart and Axelrad who studied the case records of 37 only children and 133 children with siblings. These authors concluded that the only child was significantly more often emotionally unstable, over-aggressive, seclusive and disposed to lie and run away. Children with siblings displayed more feelings of revenge, suspiciousness, temper outbursts, leadership and association with undesirable companions. Reference is also made to other studies which have demonstrated the influence of ordinal position in the family on delinquent behaviour.

Amongst other matter the authors found that a significant number of the Virginia State Penitentiary offenders came from extreme ordinal positions within the family: first born, last born or only child. In the investigation of 4,000 Adolescent Criminals carried out at Wormwood Scrubs Prison under the direction of the reviewer no evidence was found from a comparison of delinquent families with families in the general population to support the view that an only, eldest or youngest child was, because of its position in the family, either more or less liable to commit criminal offences than were intermediate children.

The authors found that the size of the family was large for all groups studied—with, of course, an exception in the only child group. This supports the finding of J. H. Bagot in his study of juvenile delinquency in Liverpool, that the possibility of a child becoming a delinquent is greater if he is a member of a large family, other things being equal, and that the chance of recidivism is also greater as the size of the family rises. It also supports the conclusion arrived at in the Wormwood Scrubs investigation that lads convicted of offences at ages 16-21 were drawn from

large families in an abnormal proportion of cases, the average number of their brothers and sisters being above that expected from any normal group of lads.

W. Norwood East.

Social Forces

October 1944, Vol. 23, No. 1.—Familism the Foundation of Chinese Social Organization.—By Cheng Ch'eng-K'un.—This article helps to explain the difficulties besetting the Chinese in their attempt to adjust themselves in the modern world. Their social organization is shown to have been (until very recently) that of a system of large patriarchal families with a minimum of interference or control from any outside government. Loyalty to the family group (including ancestors) was all-important. The weight accorded to the opinion of elders made social philosophy rather static, and so the impact of Western-ideas or organization on larger groups was met with inertia. Now, however, the influence of many powerful outside forces is liquidating the largefamily system; but this is not yet accompanied by a re-orientation of mental attitude.

The Life Cycle of an Immigrant Institution in Hawaii: The Family.—By Jitsuichi Masuoka.— In Japan the traditional family is a (male) parentchild-centred unit: it is therefore a large closelyknit unit of many persons and several generations. Furthermore, such a family remains in the same village, and therefore not only has every person a settled place within his family, but also he is born into a predetermined social position. With the immigration of a single man to Hawaii and his subsequent marriage the family centres round the Western man-wife relationship; respect for ancestors diminishes with increased distance from the original family habitat and becomes merely conventional; a person's social status can be altered by his own personal efforts (on which it almost entirely depends); and the influences on a younger generation at school introduces a North-American standard of living as desirable.

D. R. R.

CORRESPONDENCE

War and the Birth-Rate

To the Editor, Eugenics Review

SIR,—I have naturally read with interest your comments on my recent pamphlet. The attention it has had in the Press and the number of personal letters I have received have been most gratifying. Among the latter I have had some that specifically allude to, and agree with, my views on "Fear of War," which you find unconvincing. For instance, one of our leading historians wrote: "I liked your pamphlet, especially your pricking of the 'fear of war' humbug. It is what people who have small families say as an excuse." An economist in another letter wrote: "I am glad that you have dealt faithfully with the absurd 'fear of war' argument."

I will not occupy your space by recapitulating the points made in my pamphlet to which you refer in your comments. Since I wrote the pamphlet we have had the remarkable figures of demographic trends during wartime that have been

published by the Bank of International Settlements. It would be absurd to draw hasty or sweeping conclusions from these figures without much more investigation and thought. Nevertheless, this section of the B.I.S. 14th Annual Report, pages 16 and 17, deserves close scrutiny. It gives the birth-rate figures for 1913 and 1918, and for 1938 and 1943, for a number of countries. They show that in the first World War the birth-rate fell between the first of the two dates in the United Kingdom, Eire, Australia, France, Denmark, Czechoslovakia, Sweden, Switzerland and the U.S.A. In the second World War the birth-rate rose in every one of these countries; that is to say, between 1938 and 1943 the birth-rate rose in occupied countries such as France, Holland, Denmark and Czechoslovakia, in belligerent countries such as the United Kingdom, Australia and the U.S.A., and in neutral countries such as Eire, Sweden and Switzerland. Is this compatible with the "fear of war" theory?

· Fear of war is, of course, subject to many inter-

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